

RESEARCH ARTICLE OPEN ACCESS

A Scoping Review of Neighborhood Effects and Health Among Children and Adolescents: Measurement and Design Characteristics

Bria Gresham^{1,2}  | Canan Karatekin¹ ¹Institute of Child Development, University of Minnesota – Twin Cities, Minneapolis, Minnesota, USA | ²Minnesota Population Center, University of Minnesota – Twin Cities, Minneapolis, Minnesota, USA**Correspondence:** Bria Gresham (gresh027@umn.edu)**Received:** 15 April 2024 | **Revised:** 4 April 2025 | **Accepted:** 23 April 2025**Funding:** This study was supported by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).**Keywords:** adolescents | children | health | neighborhoods | scoping review

ABSTRACT

Decades of research have explored how neighborhood conditions relate to child and adolescent health, spawning numerous reviews focused on specific predictors, outcomes, or populations. Less is known about the design and characteristics underpinning this work. We conducted a scoping review of 754 studies examining neighborhood conditions and health-related factors among children and adolescents (aged 0–18) published between 2015 and 2024. This growing area of literature is largely based on observational, cross-sectional evidence of associations between objective socioeconomic status (SES) conditions and health, with over 100 studies focusing on associations between neighborhood SES and physical health, specifically. The findings of this review suggest that the current “state of the science” on neighborhoods and health among children and adolescents often does not lend itself to strong developmental conclusions, due to a reliance on observational, cross-sectional designs. Moreover, extant literature provides limited insight into whether neighborhood conditions beyond SES are associated with health. Longitudinal studies of multidomain neighborhood conditions and health represent important directions for future research.

A significant body of research has investigated the role of the neighborhood context in shaping health among children and adolescents (e.g., Adise et al. 2023; Castro et al. 2020; Gresham et al. 2021; Mayne et al. 2021; Ramey and Harrington 2019), accompanied by syntheses of said evidence (e.g., Arcaya et al. 2016; Leventhal and Brooks-Gunn 2000). The body of research on neighborhoods and health continues to grow exponentially across a variety of disciplines, each with different perspectives toward how and why neighborhoods matter for health. In epidemiology, for instance, the neighborhoods and health literature often seeks to explain patterns of health by various neighborhood conditions (Diez Roux 2018). From a developmental perspective, the neighborhood context represents a microsystem influence that interacts with other

systems at multiple levels of analysis to shape health (Bronfenbrenner 1979). Of importance across these disciplines (e.g., epidemiology, psychology, sociology) is gaining a better understanding of the causal role of neighborhoods in shaping health, as well as how to improve neighborhoods themselves or reduce the impact of residing in a poor neighborhood. However, the research on neighborhoods and health is often considered methodologically weak (Oakes et al. 2015), falling short of these goals. For example, the definition of neighborhoods and the corresponding geographic unit of analysis used to measure neighborhood conditions is not standardized, contributing to the substantial variation in findings across studies (Openshaw 1984). Relatedly, among children and adolescents within the same neighborhood (e.g., census tract, block group),

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2025 The Author(s). *Journal of Community Psychology* published by Wiley Periodicals LLC.

proximity to neighborhood exposures may impact associations with health (e.g., Heissel et al. 2018). For instance, one study showed that greater proximity to violent crime had a stronger association with sleep disturbances (Heissel et al. 2018). Additionally, accounting for changes in exposure to poor neighborhood conditions across time due to either residential mobility or changes within neighborhoods (e.g., gentrification) remains a significant challenge in research on neighborhoods health. In light of these limitations, and in combination with a robust body of literature establishing proof of concept, it is imperative that research leverages innovative approaches designed to address the known limitations in neighborhoods and health research. A better understanding of the design and characteristics underlying the neighborhood and health research, which impact causal inference and the policies and programs that arise from the research, represents an important step in strengthening research on neighborhoods and health as a whole. Thus, the purpose of this scoping review was to synthesize elements of the research design, as well as the neighborhood conditions examined and their measurement, across neighborhoods and health research conducted among children and adolescents.

1 | Neighborhoods and Health

Neighborhoods are relatively small geographical places that have social and cultural meaning to the individuals who live there. Neighborhoods are also policy-relevant because they are “nested within larger entities ... and influenced by the macro-economic forces and political decisions operating ‘upstream’” (Duncan and Kawachi 2018). It was over a century ago when Dr. John Snow was among the first to acknowledge the relationship between place and health. In trying to understand the etiology of a London cholera outbreak, Dr. Snow traced the outbreak to a water pump in the Soho neighborhood (Snow 1856). Since then, researchers have investigated the role of neighborhoods in shaping health, and this body of work has grown exponentially in the last 20 years (Oakes et al. 2015). From these decades of research, robust evidence of the deleterious impacts of adverse neighborhood conditions on health has emerged (Oakes et al. 2015). This body of research has led government agencies, policymakers, and others to implement policies and programs aimed at either improving neighborhoods themselves (Kondo et al. 2018) or relocating individuals and families to better neighborhoods (Chetty et al. 2016). However, the efficacy of these programs is mixed. For example, research leveraging the Moving to Opportunity for Fair Housing (MTO) demonstration, a randomized controlled trial of housing vouchers among low-income families in public housing in five U.S. cities, has shown both harmful and beneficial effects of housing voucher receipt among children/adolescents by participant characteristics (Gresham et al. 2024; Joshi et al. 2022; Thyden et al. 2022). For example, research suggests that adolescent girls benefited from MTO intervention relative to controls with respect to psychological distress (Schmidt et al. 2021) and alcohol use (Gresham et al. 2024; Joshi et al. 2022), whereas boys in the intervention group experienced harmful effects relative to controls. However, it remains unclear how the MTO design and other similar programs could be improved upon to more universally improve health. For instance, an intervention

largely informed by literature that relies on objectively measured conditions may discount the influence of neighborhood perceptions on influencing health among children and adolescents. As such, understanding the design and measurement of neighborhoods and health research is critical for designing effective policies and programs aimed at reducing the inequities that stem from differential exposure to poor neighborhood conditions.

2 | Neighborhoods and Childhood and Adolescence

Theoretical models and empirical evidence suggest there may be sensitive or critical stages of development where an experience may have a disproportionately strong impact compared to other developmental periods (Oyama 1979). Childhood and adolescence are marked by rapid change and growth that may make the effects of residing in adverse neighborhood environments especially pervasive relative to adulthood. For example, the increased autonomy that often accompanies adolescence may change how adolescents interact with their environment and increase the risk of exposure to adverse neighborhood conditions (Leventhal et al. 2009). As such, associations between neighborhood conditions and myriad health and developmental outcomes in children and adolescents have been investigated, including neighborhood disadvantage/advantage and alcohol use (Barr 2018), neighborhood safety and internalizing symptoms (Gresham et al. 2021), and neighborhood disorder and externalizing symptoms (Pei et al. 2019), with a wealth of evidence accumulating on the deleterious effect of poor neighborhood conditions on health among children and adolescents (Richardson et al. 2015). Although researchers have reviewed certain aspects of the literature on neighborhoods and health conducted among children and adolescents, a review of the literature that examines the characteristics of its studies and highlights gaps has not yet been conducted. Given the developmental importance of childhood and adolescence in setting the stage for later life outcomes, there is a need to better understand the types of studies being conducted and their characteristics.

3 | An Overview of Previous Reviews

The mountain of empirical studies investigating the associations between both positive and negative aspects of the neighborhood and health among children and adolescents has led to growing attempts to synthesize this body of research (Johnson et al. 2015; Shareck et al. 2023; Wiafe et al. 2021). Some authors have taken a targeted approach to synthesizing this sizable literature, focusing on a specific aspect(s) of the neighborhood (Christian et al. 2015; Shareck et al. 2023), developmental outcome (Johnson et al. 2015), or geographic region (Wiafe et al. 2021). Others have taken a broader approach to synthesizing the neighborhoods and health literature, summarizing 20 years of methodological advancement (Oakes et al. 2015). Among these reviews, however, there exists a dearth of evidence summarizing the characteristics of the neighborhoods and health research more broadly.

Citing common criticisms of the neighborhoods and health literature (e.g., measurement, design, use of administrative data), Arcaya et al. (2016) conducted a systematic review of study characteristics in multilevel neighborhoods and health studies. The review by Arcaya and colleagues marks a significant contribution to the literature, having been cited over 350 times since its publication in 2016. However, it remains unclear whether the review by Arcaya and colleagues has made a substantial impact on the issues it aims to address and whether their conclusions extend beyond multilevel studies and to research conducted among children and adolescents. For example, the authors investigate the number of articles that explicitly mention the Modifiable Area Unit Problem (MAUP) or the Uncertain Geographic Context Problem (UGCP), two important issues that aid in our understanding of the replicability crisis plaguing this body of research, finding that fewer than 5% of articles acknowledge this limitation. Given the attention received by Arcaya et al.'s (2016) review, it would stand to reason that acknowledgment of the MAUP and UGCP has increased in empirical studies, but this remains unknown. In addition to updating Arcaya et al.'s (2016) review by synthesizing recently published research, there are important features of neighborhood measures that remain understudied. For instance, it remains unclear whether this area of research predominantly relies on subjective (e.g., survey) or objective (e.g., census data, trained observer) measures of neighborhood conditions. Additionally, for subjective neighborhood measures, it is unknown the extent to which the measures rely on youth self-report, caregiver-report, teacher-report, or multiple informants. The objectivity of a measure, as well as the reporter of a subjective measure, may influence the strength and direction of the associations between neighborhood conditions and health, and subsequently influence the implications arising from them.

4 | Present Review

To (1) better understand the design and methodology and (2) elucidate gaps in the neighborhoods and health literature, we conducted a scoping review of articles published among children and adolescents (aged 0–18 years). Specifically, we examine trends in publication (including the number of articles published per year and journal of publication), study design, the neighborhood conditions examined and their measurement (i.e., objectivity, geographic unit of measurement, informant), the health-related factors examined, and acknowledgment of the MAUP. In part, this review was intended to update and expand upon a previous systematic review on this topic by Arcaya et al. (2016), which included articles published through December 1, 2014. As such, this review was restricted to studies published between January 1, 2015, and mid-2024. A scoping review is preferred over other review methods when the goal is to identify types of available evidence in a field or examine how research is conducted on a certain topic (Munn et al. 2018) and thus is the appropriate format for the substantive questions addressed in this review.

5 | Methods

The protocol for this scoping review was preregistered with the Open Science Framework ([https://osf.io/mq5v4/?view_only=](https://osf.io/mq5v4/?view_only=2a9341dea3fc4bda800ec834b8357912)

[2a9341dea3fc4bda800ec834b8357912](https://osf.io/mq5v4/?view_only=2a9341dea3fc4bda800ec834b8357912)). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) was used for reporting of results (Tricco et al. 2018).

5.1 | Search Strategy

We searched Ovid Medline and PsycInfo to identify relevant articles, as they cover a range of disciplines. Beyond restricting the search to articles that included some variation of neighborhood conditions and health and well-being in the title, abstract, or list of key concepts, we restricted the search to articles published between 2015 and 2024. We restricted the search to 2015–2024, as this review represents, in part, an update to a previous review of study characteristics in the neighborhood effects literature by Arcaya et al. (2016), which captured articles published through December 1, 2014. The electronic search strategy is detailed in the supporting materials. The search was initially conducted on January 13, 2023, and was updated on July 16, 2024. Following search execution, we removed duplicate references and uploaded them to Rayyan, a review management database (Ouzzani et al. 2016), for screening and data extraction. The PRISMA diagram detailing the screening process and exclusion reasons is shown in Figure 1. There were 754 articles eligible for inclusion (for the list of included articles, see Supporting Information S1).

5.2 | Eligibility

The detailed instructions for the title and abstract, and full-text screening phases are detailed in the supporting materials.

Broadly, articles that included both a measure of neighborhood conditions and health were eligible for inclusion in the review. The following inclusion criteria were established a priori: (1) the article must represent a quantitative study of human subjects and include individual-level data, (2) the article must include a measure of neighborhood conditions, (3) the article must include a measure of health or wellbeing, (4) the article must include a sample of children and adolescents (i.e., individuals aged 0–18), and (5) the article must be available in English.

We did not restrict the type of neighborhood conditions or health-related variables examined in the articles. Due to the vast differences in laws, policies, and cultural values across countries, we excluded studies conducted outside the U.S. Additionally, all types of reviews (e.g., systematic reviews, scoping reviews, meta-analyses) were excluded. Case studies, solely qualitative studies, conference abstracts, dissertations, gray literature, and other publications with limited information for data extraction were also excluded. Studies where the sole purpose was methodological (e.g., simulation studies, measure validation) were also excluded. Additionally, articles were excluded if the sole purpose of the measure for neighborhood conditions or health was as a covariate or confounder.

5.3 | Review Procedures

Articles were screened for eligibility in two phases – title/abstract screening and full-text screening. At each phase, articles

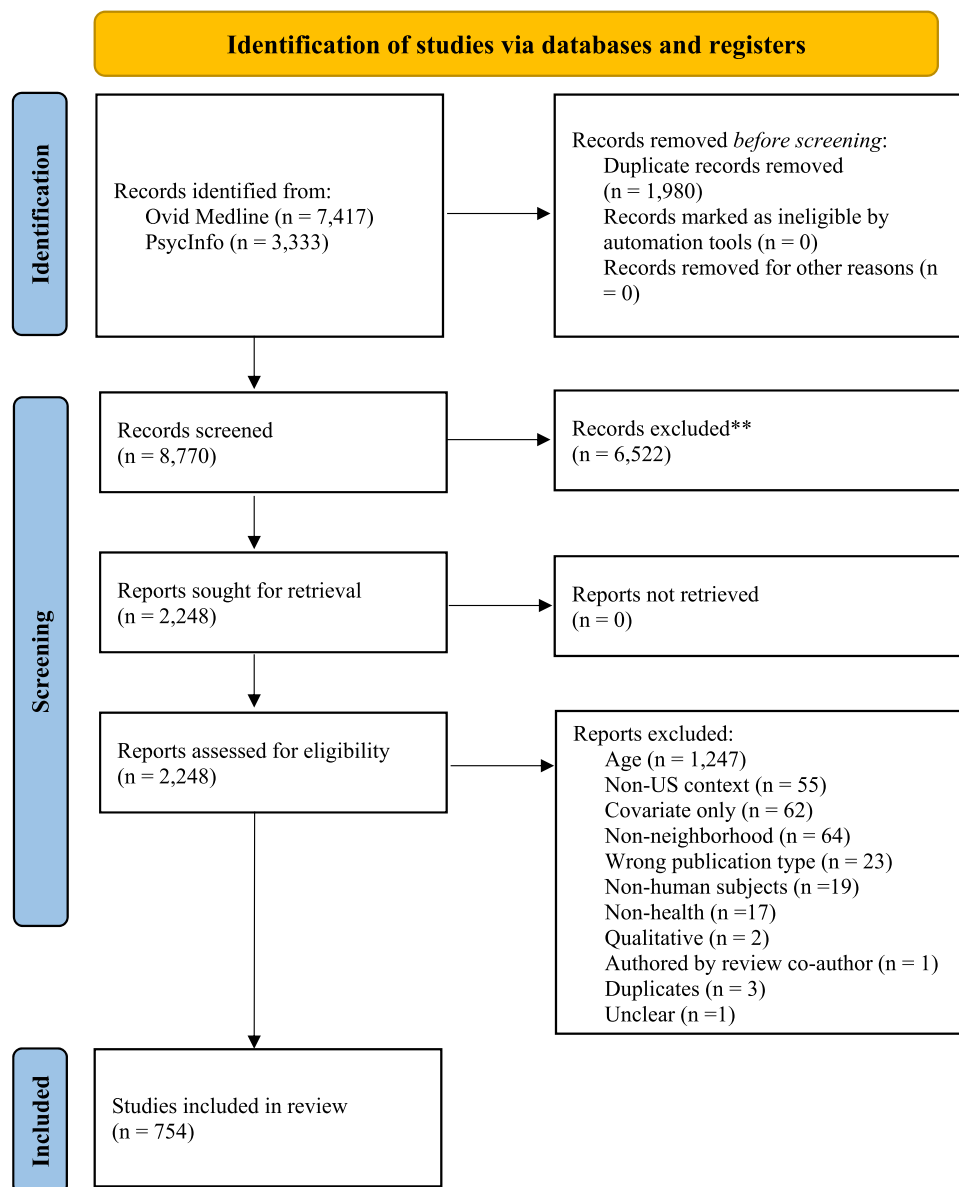


FIGURE 1 | PRISMA flow diagram showing study selection.

were screened independently by two members of the team, consisting of the lead author and several undergraduate research assistants. At each phase of the review, the instructions were piloted and clarified as necessary using 10–25 articles. Throughout the coding process, disagreements were handled via consensus between the two original screeners/coders. Because the codes for several data extraction elements were not independent (i.e., multiple responses could be coded for a single article), we used percent agreement as a measure of interrater reliability rather than Cohen's kappa for all codes, which is consistent with previous scoping reviews (Karatekin et al. 2022).

5.4 | Data Extraction

5.4.1 | Publication Journal and Year

The journal and year of publication were extracted from the reference.

5.4.2 | Study Design

We coded whether a study utilized an observational (i.e., studies that seek to observe the influence of a variable but do not involve any attempts to change who is or is not exposed) or experimental (i.e., studies that manipulate the exposure, controlling who is and who is not exposed) design. We also coded whether a study employed a cross-sectional (i.e., only one time point) or longitudinal (i.e., more than one time point) design. Interrater reliability was 97.71% and 89.57%, respectively.

5.4.3 | Neighborhood Conditions

5.4.3.1 | Domain of Neighborhood Conditions Examined. We coded the neighborhood conditions of interest (i.e., those included in the research question(s) rather than as covariates) in each study into the following



FIGURE 2 | Operational definitions and examples of neighborhood conditions, by category. A domain was considered included in a study if the domain was at all captured in a measure of neighborhood conditions (e.g., single indicator variables, composite measures capturing a single or multiple domains).

categories based on previous research (Arcaya et al. 2016; van Vuuren et al. 2014): socioeconomic status (SES), demographic composition, social cohesion, public disorder, built environment, crime and safety, housing, and health (see Figure 2 for operational definitions and examples of each domain; the detailed search strategy is presented in the Supporting Information). Each category was coded as “yes” (i.e., a single indicator or a composite scale that captured the domain in whole or in part) or “no” (i.e., not present). For example, if an article included median household income as the neighborhood measure of interest we coded SES, whereas if an article included the Area Deprivation Index (Maroko et al. 2016), a composite measure of 17 indicators capturing education, income/employment, housing, and household characteristics, we coded SES, demographic composition, and housing. We included all neighborhood conditions included in the research goals, regardless of whether it was a predictor, outcome, moderator, or mediator. Interrater reliability was excellent across all categories of neighborhood conditions (SES – 90.14%; demographic composition – 89.71%; social cohesion – 91.43%; public disorder – 87.29%; built environment – 94.43%; crime and safety – 90.43%; housing – 90.00%; health – 96.86%; and unclear – 98.43%).

5.4.3.2 | Geographic Unit of Measurement. The geographic unit(s) of measurement (e.g., census tract, census block group, zip code, metropolitan statistical area) were coded for each article. Each geography specified in the measurement of neighborhood conditions was coded. Interrater reliability for the geographic measurement of neighborhood conditions was acceptable (84.71%).

5.4.3.3 | Objectivity. We coded whether the neighborhood measure(s) that were part of the research goals were based on objective data (e.g., census data), subjective reports, or both. The raters agreed on 90.86% of the studies that were coded for objectivity.

5.4.3.4 | Neighborhood Informant. For articles that included subjectively measured neighborhood conditions, we coded the informant(s) of the measure (e.g., self-report, parent-report, teacher-report). The interrater reliability for the informant of the subjective neighborhood measure was 88.07%.

5.4.3.5 | MAUP. We dichotomously coded whether the authors acknowledged the “modifiable area unit problem,” or the issue in the neighborhood effects literature that arises from varying geographical units of measurement across studies (Openshaw 1984). Although we originally planned to code

MAUP for all articles, we only coded MAUP for articles with objective measures of the neighborhood, as articles that used subjective neighborhood measures generally did not have an associated geography. Interrater reliability was 92.62%.

5.4.4 | Health-Related Factors

We coded the health-related factors of interest (i.e., those included in the research question(s) rather than as a covariate) for each study. Due to substantial heterogeneity in the health-related measures examined, we did not code each health-related factor separately. Instead, we coded the following categories: (1) health-risk and health-promotive behaviors, (2) biomarkers of health risk, (3) genetic factors, (4) mental health (e.g., internalizing and externalizing symptoms), (5) physical health, (6) development, (7) birth and fertility, (8) mortality, and (9) health system interactions (see Table 1 for operational definitions and examples). We coded all health-related measures of interest in an article, regardless of whether it was the predictor, moderator, mediator, moderator, or outcome in the analyses. We also coded the relevant category for populations of interest (e.g., adolescents with autism spectrum disorder). Across each category, inter-rater reliability ranged from good-to-excellent (health-risk and health-promotive behaviors – 93.14%; biomarkers of health risk – 93.71%; genetic factors – 98.14%; mental health – 89.57%; physical health – 87.14%; development – 92.14%; birth and fertility – 97.29%; mortality – 98.43%; health system interactions – 92.00%.

5.5 | Data Analysis

As is common with scoping reviews (Tricco et al. 2018), descriptive statistics were examined and reported. Reliability was not assessed for journal of publication and publication year since this information was extracted directly from the reference. Analyses were conducted in R version 4.3.0 (R Core Team 2023).

6 | Results

After careful selection, there were 754 articles published between 2015 and 2024 that met the inclusion criteria. Select descriptives are presented below; see Supporting Information S2: Table S1 for complete descriptives. Figure 3 shows the number of articles that included each combination of neighborhood conditions and health-related factors (e.g., 134 articles included neighborhood SES and physical health in the research goals).

6.1 | Publication Journal and Year

The number of articles on neighborhood conditions and health generally grew over time (see Figure 4). Articles were published in nearly 300 different journals, with the most frequent journals of publication being *Health & Place* ($N = 32$), the *International Journal of Environmental Research and Public Health*, the *Journal of Pediatrics*, the *Journal of Youth and Adolescence*,

TABLE 1 | Operational definitions and examples of health-related factors, by category.

Category	Operational definition	Examples
Health-risk and health-promotive behaviors ¹	Factors that put individuals at risk for a health condition or promote health	Physical activity, risky sexual behaviors, substance use, diet, sleep
Biomarkers of health risk ¹	Objectively measured biomarkers of risk for health conditions	Height, weight, blood pressure, cortisol, epinephrine, brain structure or function, glucose
Genetic factors	Genes and other genetic-related factors	Allele variation, gene expression, genetic risk for a health condition
Mental health	Diagnoses and symptoms of mental health disorders, including both internalizing and externalizing	Depression, anxiety, bipolar disorder, internalizing, externalizing, conduct problems, substance use disorder
Physical health	Diagnoses and symptoms of physical health conditions/disorders and general health	Cardiovascular disease, asthma, diabetes, injury, illness, self-rated general health
Development	Indicators of development, cognition, and diagnoses of developmental disorders	Meeting developmental milestones, attention-deficit/hyperactivity disorder, autism spectrum disorder, cognitive function
Birth and fertility	Birth outcomes and fertility-related factors	Preterm birth, low birth weight, congenital malformations, age at first birth, puberty
Mortality	All-cause and cause-specific mortality	Risk of death, deaths due to a specific cause or condition, premature mortality
Health system interactions	Interactions with the healthcare system	Receipt of interventions, hospital visits, health insurance status, preventative care receipt

¹ Health-related measures were coded in these categories only when the authors framed them as a behavior or health indicator, rather than a disorder (e.g., substance use vs. substance use disorder; body mass index vs. obesity).

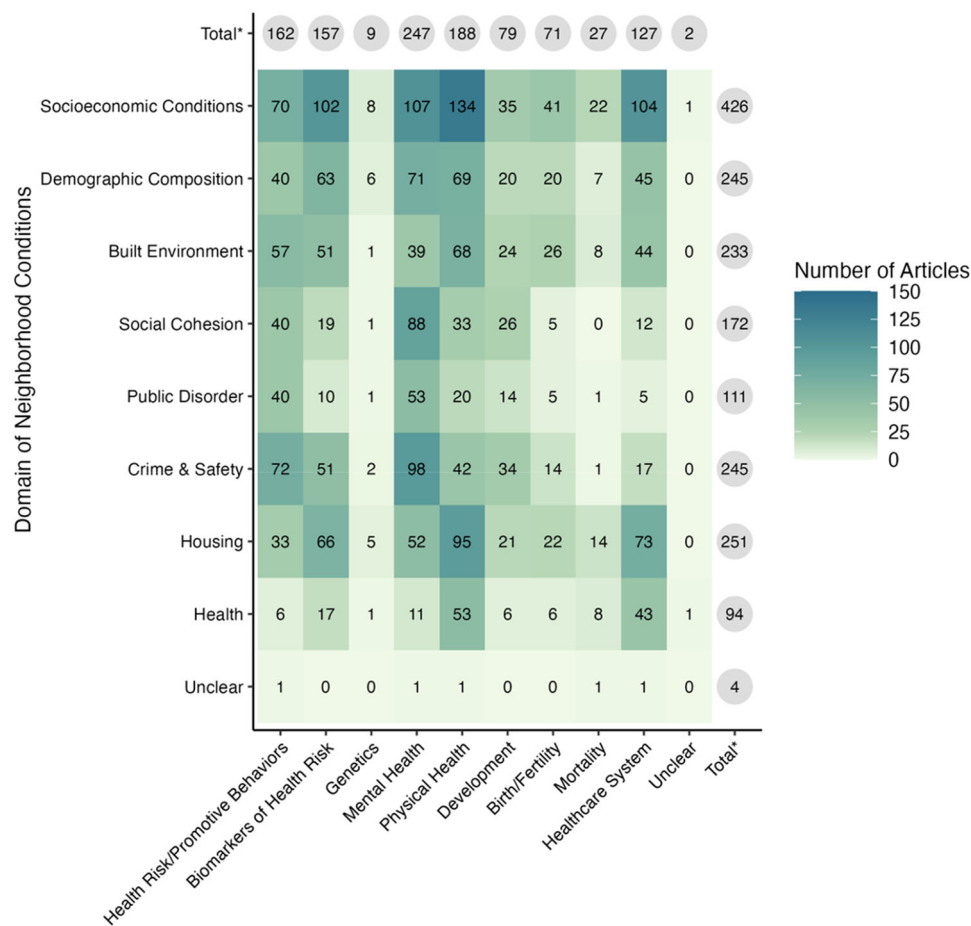


FIGURE 3 | Plot showing the number of studies published between 2015 and 2024 that examined each domain of neighborhood conditions and health-related factors separately (gray), as well as for each possible cross tabulation (heatmap, with darker colors indicating a larger number of studies). *Studies often examined more than one domain of neighborhood conditions and/or health-related factor – the totals reflected in gray do not represent the sum of each column or row.

Pediatrics, and *Social Science & Medicine*, with the latter five journals having published 18 relevant articles each.

6.2 | Study Design

Nearly all of the included articles utilized an observational design ($N = 728$; 96.55%). Additionally, there were slightly more articles that utilized a cross-sectional design ($N = 404$; 53.58%) than a longitudinal design ($N = 350$; 46.42%).

6.3 | Neighborhood Conditions

6.3.1 | Domain of Neighborhood Conditions Examined

Figure 3 presents the number of articles that included a measure of neighborhood conditions in each category. SES measures were by far included most often ($N = 426$; 56.50%), followed by housing ($N = 251$; 33.29%), and crime and safety and demographic composition ($N = 245$; 32.49%, each). Multiple domains of neighborhood conditions were included in most articles ($N = 522$; 69.05%). The most frequent domains of

neighborhood conditions examined in concert were neighborhood SES and demographic composition ($N = 221$) or housing ($N = 220$).

6.3.2 | Objectivity

Objective or administrative neighborhood data were exclusively used most often ($N = 450$; 59.68%). Comparatively, subjective assessments of the neighborhood were exclusively used in 235 articles (31.17%). Nearly 10% of the articles leveraged a combination of objective and subjective measures of the neighborhood environment ($N = 68$).

6.3.3 | Geographic Unit of Measurement

The census tract was the most used geographical unit to capture the neighborhood ($N = 303$; 40.19%), followed by the census block group ($N = 94$; 12.47%). Spatial measures ($N = 86$; 11.41%) and zip codes/zip code tabulation areas ($N = 63$; 8.36%) were also relatively common geographies used to measure neighborhood conditions. The smallest available

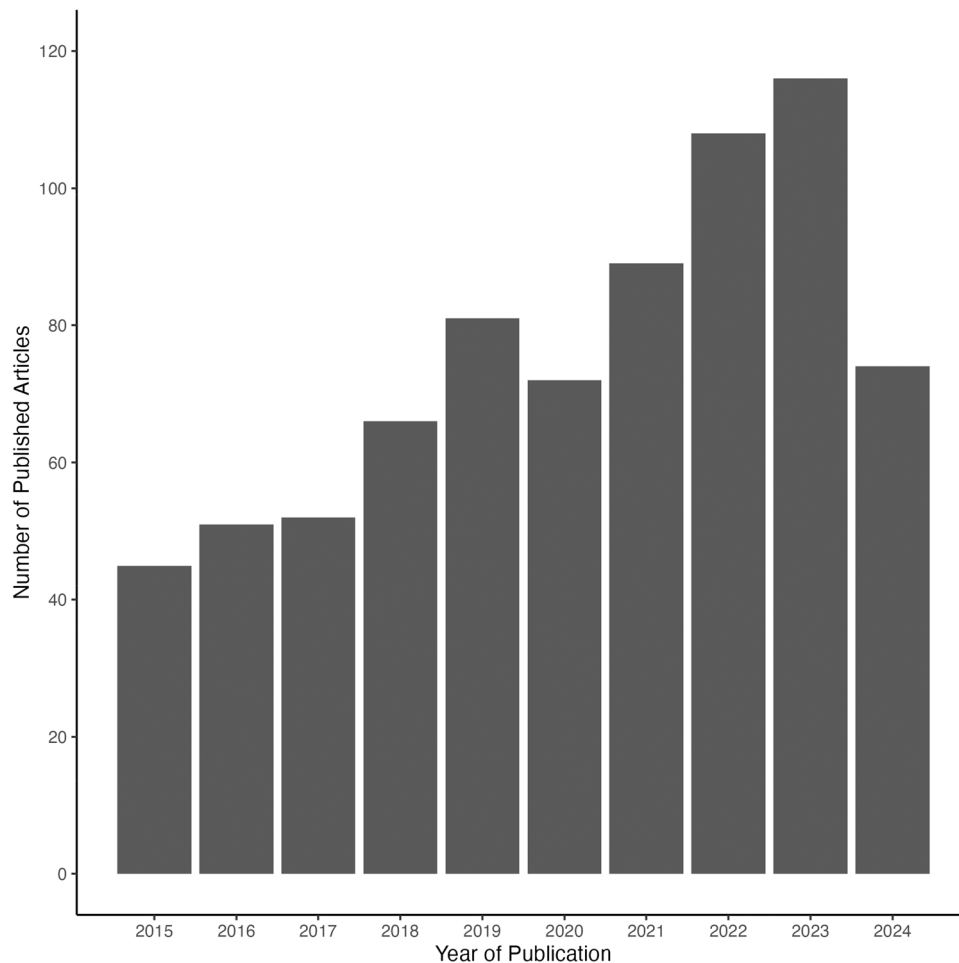


FIGURE 4 | Number of articles published per year between 2015 and 2024 ($N = 754$).

census geographical unit, the census block, was used in only one study.

6.3.4 | Neighborhood Informant

Of the 303 studies that included a subjective measure of the neighborhood (i.e., coded as “subjective” or “both” under objectivity), caregivers most frequently responded to surveys regarding neighborhood perceptions. ($N = 183$; 60.40%). Youth-reported perceptions of the neighborhood were utilized in 127 studies (41.91%). In a few studies, neighbors ($N = 5$) or interviewers ($N = 6$) reported on a participant’s neighborhood. Other respondents were used in three studies, such as health surveys sent to households across several counties (Daniels et al. 2021). Twenty-five studies used a multi-informant approach.

6.3.5 | MAUP

An overwhelming majority of articles did not explicitly mention or allude to the MAUP ($N = 492$; 94.98%), with only 26 articles acknowledging the issue (5.02%). Two hundred and thirty-five articles did not have objective data and thus were not coded for whether the authors mentioned the MAUP.

6.4 | Health-Related Factors

The number of articles that included each domain of health-related factors is presented in Figure 4. The most examined domain of health-related factors included in articles on neighborhoods and health was mental health ($N = 247$; 32.76%), followed by physical health ($N = 188$; 24.93%). Health-risk and health-promotive behaviors and biomarkers of health risk were also commonly studied ($N = 162$ and $N = 157$, respectively), as were interactions with the health care system ($N = 127$; 16.84%). Comparatively, relatively few studies included a measure of development ($N = 79$; 10.48%), birth and/or fertility ($N = 71$; 9.42%), or mortality ($N = 27$; 3.58%). Genetic-related factors were minimally examined ($N = 9$; 1.19%).

7 | Discussion

In this scoping review, we examined study design and measurement characteristics of over 750 studies of neighborhoods and health conducted among children and adolescents (aged 0–18) published between 2015 and 2024. We found that the number of articles published each year pertaining to neighborhoods and health among children and adolescents increased over the review period (with the exception of 2020, the onset of the COVID-19 pandemic), half of which utilized cross-sectional

designs. Socioeconomic neighborhood conditions were included in over half of all studies included in the review. The majority of neighborhood conditions included in the articles were assessed via census tract-level, objective data. For studies that used subjective measures of neighborhood conditions, caregiver reports were utilized in the overwhelming majority. We also found that very few studies mentioned the MAUP. With respect to health-related factors, most studies included a measure of mental or physical health. Together, these findings provide an overview of the state of the neighborhoods and health literature conducted among children and adolescents, highlighting gaps in existing research and directions for future work.

7.1 | Implications

7.1.1 | Research Design

In this scoping review, we identified a similar number of studies that were observational versus experimental to Arcaya et al. (2016). Although most of the studies included in the review were observational, we did not code the quality of each observational study in terms of causal inference beyond whether a study was cross-sectional or observational. We also found that over 50% of studies in the review utilized a cross-sectional design.

The use of cross-sectional designs when investigating neighborhood conditions and health among child and adolescent samples is especially concerning, as they do not allow for the examination of change over time, hindering developmental insight. Although cross-sectional designs provide preliminary insight into the associations between neighborhood conditions and health and provide a feasible way to examine associations across different age groups, longitudinal research is essential to rigorously examine developmental processes. For example, identifying sensitive periods in development, during which the effects of neighborhood conditions may be especially pervasive relative to other developmental periods, is critical for early intervention. However, cross-sectional findings are limited in their utility for identifying sensitive periods and examining how neighborhood conditions may impact health over time. Instead, longitudinal designs follow participants over time, with repeated assessments of neighborhood conditions and/or health-related outcomes, uniquely positioning these studies to answer key developmental questions. One such example comes from the Project on Human Development in Chicago Neighborhoods study, a multicohort longitudinal study from the 1990s and 2000s (Anderson et al. 2019). Leveraging multilevel latent growth curve models, Anderson et al. (2019) found that residing in an advantaged neighborhood in adolescence was associated with faster growth in reading achievement relative to residing in a disadvantaged neighborhood in early or middle childhood. Additional longitudinal evidence is needed to advance our understanding of neighborhood conditions in shaping healthy development.

In addition to providing limited insight into developmental processes, cross-sectional designs yield limited causal inference. While a truly comprehensive understanding of the effects of neighborhoods on health can only be ascertained by a variety of

research designs, different observational designs vary widely in the causal inference afforded. Whereas cross-sectional designs evaluate associations between two constructs assessed at the same time, longitudinal designs can be used to approximate whether one construct *causes* changes in another because they reduce confounding and the possibility of reverse causation (VanderWeele 2021). For example, one study examined whether neighborhood opportunity was associated with trajectories of body mass index and obesity from birth through adolescence, demonstrating that youth residing in higher opportunity neighborhoods had a lower risk of obesity and lower trajectory of body mass index across time (Aris et al. 2022). In this study, the assessment of neighborhood opportunity preceded the assessment(s) of body mass index, thereby providing stronger support for the causal role of neighborhood opportunity in shaping obesity.

Another limitation of the reliance on cross-sectional designs in neighborhoods and health research stems from an inability to account for or understand the influence of residential mobility. According to conceptual models on development (e.g., probabilistic epigenesis; Gottlieb 2007), the impact of a given exposure on development arises from previous and current experiences. Residential mobility plays a crucial role in the duration and timing of exposure to adverse neighborhood conditions, and subsequently, associations between neighborhood conditions and health (Wodtke 2013). Indeed, longitudinal research suggests that neighborhood disadvantage is associated with depressive and anxiety symptoms among youth who consistently reside in disadvantaged neighborhoods but not among those who reside in a disadvantaged neighborhood but relocate to a lower poverty neighborhood (King et al. 2022). These findings demonstrate the importance of longitudinal designs to develop a deeper understanding of the residential mobility in shaping neighborhood effects on health. Beyond an indirect influence on health via potential changes in neighborhood exposures, residential mobility may also have a more direct influence on health. Indeed, one systematic review showed that residential mobility in childhood is associated with poor mental health outcomes and greater engagement in risky behaviors (Jelleyman and Spencer 2008), possibly due to the disruption of social groups.

In sum, cross-sectional designs provide a “snapshot” of associations between neighborhood conditions and health but are limited in their utility to (1) understand the causal role of neighborhoods in influencing health, (2) advance our understanding of the complex, dynamic associations between neighborhoods and health across development, and (3) account for change in neighborhood exposures across time due to factors such as residential mobility and gentrification. Longitudinal designs are critical for building a more informative, methodologically robust literature linking neighborhood conditions to health.

7.1.2 | Neighborhood Conditions

7.1.2.1 | Domain of Neighborhood Conditions. We found that neighborhood socioeconomic conditions were the focus of investigation most often, aligning with prior work (e.g.,

Arcaya et al. 2016), but that a broader range of neighborhood conditions is being examined than was previously shown (Arcaya et al. 2016). However, very few studies examined the influence of health-related neighborhood conditions, indicating that certain domains of neighborhood conditions remain vastly understudied. The disproportionate focus on socioeconomic conditions of the neighborhood may hinder our understanding of whether and how other aspects of the neighborhood influence child and adolescent development. For instance, the increased autonomy that accompanies adolescence, coupled with the shift in focus away from the family and toward broader social networks (Leventhal et al. 2009), may increase the importance of neighborhood social factors or crime/safety relative to other neighborhood conditions (e.g., SES, built environment). We also found that many articles included measures of the neighborhood that captured multiple categories of neighborhood conditions (e.g., SES, demographic composition, and health), highlighting the need to consider *whether* and *how* various aspects of the neighborhood may be conceptually distinct. For instance, if SES conditions of the neighborhood give rise to social disorganization, and subsequently crime, as suggested by the social disorganization theory (Sampson and Groves 1989), a measure that includes indicators of SES, disorder, and crime may conflate the process by which this occurs. Moreover, the inclusion of multiple domains of neighborhood conditions in a single measure may lead to a more heterogeneous body of literature, thereby limiting the ability of researchers and policymakers alike to draw conclusions about the associations between unique domains of neighborhood conditions and health. Together, the (1) relatively limited focus on neighborhood conditions beyond socioeconomic factors and (2) lack of specificity in the domains of neighborhood conditions captured by composite measures, highlights a need for further conceptual clarity regarding which neighborhood conditions matter for health and the similar but distinct ways in which they may exert influence.

7.1.2.2 | Informant of Neighborhood Conditions.

Another important aspect of neighborhood condition measurement is the measure's informant. In the existing literature on neighborhoods and health among children and adolescents, we found that caregivers were the most common informants of perceived neighborhood conditions, and that justification for the use of caregivers over other informants was frequently not provided. Given that evidence suggests adolescents and caregivers may differ in their ratings of perceived neighborhood conditions (Held et al. 2020), the reporter of neighborhood conditions may play a critical role in the observed strength of associations with health. On one hand, the adolescent model of developmental timing with respect to neighborhood conditions and health suggests that the increased autonomy and exploration characteristic of adolescence results in (1) increased time spent in the neighborhood unmediated by caregivers and other adults and (2) an increased salience of extrafamilial contexts on health (Leventhal 2018). Accordingly, adolescent reports of neighborhood conditions may provide a more accurate reflection of neighborhood experiences and, in turn, may yield more precise estimates of associations between neighborhoods and health. In contrast, the early childhood model of developmental timing highlights the importance of early environments in establishing health trajectories that persist into adolescence and

adulthood (Leventhal 2018). As such, caregivers may have a more comprehensive view of the neighborhood context, as they are the primary facilitators of interactions with neighborhood institutional resources across childhood and adolescence. In sum, although caregiver-, youth-, and researcher-reported measures represent valid ways to assess neighborhood conditions, this variation may be a meaningful explanatory factor of the heterogeneity in findings across studies of neighborhoods and health.

7.1.2.3 | Geography and Objectivity. The geographic unit of measurement used to assess neighborhood conditions was predominantly operationalized using census boundaries (i.e., tracts, block groups, blocks). While the use of census geographies may make research more directly comparable across studies, these geographies are administrative in nature and may not accurately represent the area children and adolescents consider to be their neighborhood. This may lead to little correspondence between objective and subjective measures of the neighborhood. There were also frequently no geographic boundaries provided to research participants completing surveys about their neighborhoods. Although participants can then construct a representation of the geographic area most meaningful to them as individuals, this may add to heterogeneity in findings within and across studies. In contrast, studies that ask participants to consider a specific spatial area, such as the area that represents a 10–15-min walk around the home or school (Cho and Kim 2018), may significantly reduce bias in self-reported measures and make for a more interpretable body of research.

It should be noted, however, that spatial concordance does not entirely account for discrepant ratings across residents, researchers, and administrative data. For instance, in their mixed-methods study, Pasco and White (2024) showed adolescent residents and researchers a series of identical photos of the residents' neighborhood. Although there was a high degree of overlap between adolescent- and researcher-observed neighborhood conditions, adolescents cited additional aspects of the neighborhood environment (e.g., access or lack thereof to institutional and social resources, sense of belonging, negative valence) that were not captured by researchers (Pasco and White 2024). These findings suggest that there are salient aspects of the neighborhood environment that cannot be well-captured by researcher-reported or administrative data, which may account for the stronger associations between subjective, rather than objective, neighborhood conditions and health (Plunkett et al. 2007).

Another aspect of neighborhood exposures that is not currently well-captured by objective measures that rely on administrative boundaries is the role of proximity to exposure to adverse neighborhood conditions. With respect to neighborhood crime, evidence suggests that proximity to violent crime impacts the magnitude of the association with health (Heissel et al. 2018). For example, Heissel et al. (2018) found that although the occurrence of a violent crime within the police beat on a given day impacted the next day's sleep overall, living in closer proximity to the location of the crime had more pronounced effects.

Together, these findings highlight the relative importance of the objectivity and geographic unit of analysis used to measure

neighborhood conditions in influencing associations between neighborhoods and health across studies.

7.1.2.4 | MAUP. With respect to the MAUP, although the articles included in this review varied substantially with respect to the geographic unit of analysis used to conceptualize neighborhoods, we found that just over 5% of studies explicitly discussed this issue, aligning with previous work (Arcaya et al. 2016). This is concerning, as previous research suggests that the spatial scale used to measure neighborhood conditions substantially impacts the magnitude of associations with health (e.g., Chen et al. 2022).

7.1.3 | Health-Related Factors

With respect to the health-related factors examined, we found relatively few studies including measures of development, birth/fertility, mortality, and genetics. Despite the limited inclusion of certain domains, we found that a wide variety of health-related factors (e.g., substance use, internalizing, externalizing, asthma, physical activity) were examined in relation to neighborhood conditions. This broad focus highlights the robustness of the literature on neighborhoods and health.

7.2 | Recommendations for Neighborhood Effects Researchers

Our findings highlight several important directions for future research examining associations between neighborhood conditions and health among children and adolescents to build a stronger, more developmentally informative body of research. Although we recognize there are financial and institutional barriers that result in the use of cross-sectional designs, we urge researchers to use longitudinal designs, particularly when experimental designs are not appropriate. Doing so will improve causal inference, advance our understanding of *when* in development neighborhoods matter for health and *how* these complex associations dynamically unfold, and allow one to account for or directly examine the role of residential mobility and neighborhood change. Additionally, researchers should consider conducting neighborhood effects research that moves beyond socioeconomic conditions to incorporate less-studied domains of neighborhood conditions. A body of evidence that establishes the similar but distinct associations between domain-specific neighborhood conditions and health is critical to identify and intervene upon the unique pathways through which they may exert influence on health. When feasible, researchers should also consider using subjective assessments of neighborhood exposures, as residents cue into and assign meaning to features of the neighborhood not well-captured by objective or administrative data. Relatedly, although developmental models suggest that both youth-reported and caregiver-reports may accurately reflect neighborhood conditions, researchers should carefully consider the most appropriate respondent for the research question(s) and leverage a multi-informant approach, when possible. Furthermore, with respect to objective measures of neighborhood conditions, researchers should (1) acknowledge the influence of the MAUP on findings,

(2) examine associations across multiple spatial scales, and (3) reduce reliance on administrative boundaries when possible, and instead focus on proximity to neighborhood exposures. Most importantly, we need to move beyond establishing direct associations between myriad neighborhood conditions and health, and think more critically about *whether, how, and for whom* neighborhoods shape health.

It is important to note that the above-mentioned recommendations for future research are not new. Indeed, previous reviews related to neighborhoods and health research have consistently made specific, actionable recommendations for future research in line with those outlined above (Arcaya et al. 2016; Oakes et al. 2015). Yet, this review demonstrates limited progress in addressing several of the well-known methodological limitations underpinning this body of research to date. It is our hope that this review provides renewed attention toward these limitations and ushers in an era of more robust neighborhood effects research.

7.3 | Strengths and Limitations

Strengths of this review include the systematic and comprehensive nature of the search, the large number of studies screened and reviewed, and the degree of reliability achieved for data extraction. One limitation of this review is that it was restricted to studies conducted in the United States and thus is not representative of the neighborhoods and health literature on a global scale. This review is also limited by the decisions made regarding the search terms and protocol. For example, we focused our search on articles indexed in Ovid Medline and PsycINFO and did not conduct forward and backward citation chaining due to the large number of articles returned by the search. We also did not examine the measurement of health-related factors beyond the domain captured (e.g., diagnoses vs. symptoms, medical records vs. self-report), which may have added additional insight into future directions in this line of work. Finally, although this review included studies published during the height of the COVID-19 pandemic, we did not examine the role of pandemic timing in these findings.

8 | Conclusions

Overall, this review suggests that the current “state of the science” on neighborhoods and health among children and adolescents often does not lend itself to strong developmental conclusions. Specifically, across over 750 studies investigating associations between neighborhood conditions and health, research largely (1) utilizes cross-sectional designs, obscuring *when* neighborhoods matter for health, (2) relies on objective measures of neighborhood conditions, which may not reflect child and adolescent experiences, (3) operationalizes neighborhoods via various administrative boundaries, giving rise to a heterogeneous body of evidence, and (4) disproportionately focuses on neighborhood socioeconomic conditions, hindering insight into the role of other domains of neighborhood conditions that may be more salient among children and adolescents (e.g., safety, limited greenspace). In line with these findings and conclusions, we provide specific, actionable recommendations

to researchers conducting neighborhood effects studies, such as reducing reliance on administrative boundaries to incorporate the role of proximity to neighborhood exposures. A more robust body of evidence will provide critical insight into the effective design and implementation of prevention and intervention efforts to promote healthy development for all.

Acknowledgments

The authors gratefully acknowledge support from the Minnesota Population Center (P2C HD041023, Dr. Osypuk, PI) funded through a grant from the Eunice Kennedy Shriver National Institute for Child Health and Human Development (NICHD). The funding source provided no oversight in the completion of this study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data is available upon request.

Peer Review

The peer review history for this article is available at <https://www.webofscience.com/api/gateway/wos/peer-review/10.1002/jcop.70013>.

References

- Adise, S., A. T. Marshall, E. Kan, M. R. Gonzalez, and E. R. Sowell. 2023. "Relating Neighborhood Deprivation to Childhood Obesity in the ABCD Study: Evidence for Theories of Neuroinflammation and Neuronal Stress." *Health Psychology* 42, no. 12: 868–877. <https://doi.org/10.1037/hea0001250>.
- Anderson, S., W. Johnston, and T. Leventhal. 2019. "When Neighborhoods Matter: Developmental Timing and Youth Reading Achievement and Problem Behaviors." *Social Science Research* 81: 1–11. <https://doi.org/10.1016/j.ssresearch.2019.02.010>.
- Arcaya, M. C., R. D. Tucker-Seeley, R. Kim, A. Schnake-Mahl, M. So, and S. V. Subramanian. 2016. "Research on Neighborhood Effects on Health in the United States: A Systematic Review of Study Characteristics." *Social Science & Medicine* (1982) 168: 16–29. <https://doi.org/10.1016/j.socscimed.2016.08.047>.
- Aris, I. M., W. Perng, D. Dabelea, et al. 2022. "Associations of Neighborhood Opportunity and Social Vulnerability With Trajectories of Childhood Body Mass Index and Obesity Among US Children." *JAMA Network Open* 5, no. 12: e2247957. <https://doi.org/10.1001/jamanetworkopen.2022.47957>.
- Barr, P. B. 2018. "Neighborhood Conditions and Trajectories of Alcohol Use and Misuse Across the Early Life Course." *Health & Place* 51: 36–44. <https://doi.org/10.1016/j.healthplace.2018.02.007>.
- Bronfenbrenner, U. 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.
- Castro, I. E., B. Hruska, and B. B. Gump. 2020. "Race Differences in the Effect of Subjective Social Status on Hostility and Depressive Symptoms Among 9- to 11-Year-Old Children." *Journal of Racial and Ethnic Health Disparities* 7, no. 5: 844–853. <https://doi.org/10.1007/s40615-020-00707-9>.
- Chen, X., X. Ye, M. J. Widener, et al. 2022. "A Systematic Review of the Modifiable Areal Unit Problem (MAUP) in Community Food Environmental Research." *Urban Informatics* 1, no. 1: 22. <https://doi.org/10.1007/s44212-022-00021-1>.
- Chetty, R., N. Hendren, and L. F. Katz. 2016. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence From the Moving

to Opportunity Experiment." *American Economic Review* 106, no. 4: 855–902. <https://doi.org/10.1257/aer.20150572>.

Cho, D., and S. Kim. 2018. "Interplay Between Self-Efficacy and Perceived Availability at Home and in the School Neighborhood on Adolescents' Fruit and Vegetable Intake and Energy-Dense, Low-Nutrient Food and Sugary Drink Consumption." *Journal of Nutrition Education and Behavior* 50, no. 9: 856–867. <https://doi.org/10.1016/j.jneb.2018.06.010>.

Christian, H., S. R. Zubrick, S. Foster, et al. 2015. "The Influence of the Neighborhood Physical Environment on Early Child Health and Development: A Review and Call for Research." *Health & Place* 33: 25–36. <https://doi.org/10.1016/j.healthplace.2015.01.005>.

Daniels, K., F. Lê-Scherban, A. H. Auchincloss, et al. 2021. "Longitudinal Associations of Neighborhood Environment Features With Pediatric Body Mass Index." *Health & Place* 71: 102656. <https://doi.org/10.1016/j.healthplace.2021.102656>.

Diez Roux, A. 2018. "Foreword." In *Neighborhoods and Health* (2nd ed.). Oxford University Press.

Duncan, D. T., and I. Kawachi. 2018. *Neighborhoods and Health*. Oxford University Press.

Gottlieb, G. 2007. "Probabilistic Epigenesis." *Developmental Science* 10, no. 1: 1–11. <https://doi.org/10.1111/j.1467-7687.2007.00556.x>.

Gresham, B., B. McManus, and D. Stavrinou. 2021. "Interactive Effects of Neighborhood Safety and Screen Time on Adolescent Internalizing Symptoms." *Journal of Developmental and Behavioral Pediatrics: JDBP* 42, no. 9: 734–741. <https://doi.org/10.1097/DBP.0000000000000959>.

Gresham, B., N. H. Thyden, S. Gailey, and T. L. Osypuk. 2024. "Effect of a Randomized Controlled Trial of Housing Vouchers on Adolescent Risky Sexual Behavior Over a 15-Year Period." *Archives of Sexual Behavior* 53: 457–469. <https://doi.org/10.1007/s10508-023-02736-x>.

Heissel, J. A., P. T. Sharkey, G. Torrats-Espinosa, K. Grant, and E. K. Adam. 2018. "Violence and Vigilance: The Acute Effects of Community Violent Crime on Sleep and Cortisol." *Child Development* 89, no. 4: e323–e331. <https://doi.org/10.1111/cdev.12889>.

Held, M. L., A. Jones, and S. Forrest-Bank. 2020. "Predictors of Latinx Youth Health and Emotional Well-Being: Social Determinants of Health Perspective." *Journal of Racial and Ethnic Health Disparities* 7, no. 6: 1188–1201. <https://doi.org/10.1007/s40615-020-00744-4>.

Jelleyman, T., and N. Spencer. 2008. "Residential Mobility in Childhood and Health Outcomes: A Systematic Review." *Journal of Epidemiology and Community Health* 62, no. 7: 584–592. <https://doi.org/10.1136/jech.2007.060103>.

Johnson, R. M., E. M. Parker, J. Rinehart, J. Nail, and E. F. Rothman. 2015. "Neighborhood Factors and Dating Violence Among Youth." *American Journal of Preventive Medicine* 49, no. 3: 458–466. <https://doi.org/10.1016/j.amepre.2015.05.020>.

Joshi, S., N. M. Schmidt, N. H. Thyden, et al. 2022. "Do Alcohol Outlets Mediate the Effects of the Moving to Opportunity Experiment on Adolescent Excessive Drinking? A Secondary Analysis of a Randomized Controlled Trial." *Substance Use & Misuse* 57, no. 6: 1788–1796. <https://doi.org/10.1080/10826084.2022.2115847>.

Karatekin, C., S. M. Mason, A. Riegelman, et al. 2022. "Adverse Childhood Experiences: A Scoping Review of Measures and Methods." *Children and Youth Services Review* 136: 106425. <https://doi.org/10.1016/j.childyouth.2022.106425>.

King, C., X. Huang, and N. A. Dewan. 2022. "Continuity and Change in Neighborhood Disadvantage and Adolescent Depression and Anxiety." *Health & Place* 73: 102724. <https://doi.org/10.1016/j.healthplace.2021.102724>.

Kondo, M. C., E. Andreyeva, E. C. South, J. M. MacDonald, and C. C. Branas. 2018. "Neighborhood Interventions to Reduce Violence." *Annual Review of Public Health* 39, no. 1: 253–271. <https://doi.org/10.1146/annurev-publhealth-040617-014600>.

- Leventhal, T. 2018. "Neighborhood Context and Children's Development: When Do Neighborhoods Matter Most?" *Child Development Perspectives* 12, no. 4: 258–263. <https://doi.org/10.1111/cdep.12296>.
- Leventhal, T., and J. Brooks-Gunn. 2000. "The Neighborhoods They Live In: The Effects of Neighborhood Residence on Child and Adolescent Outcomes." *Psychological Bulletin* 126, no. 2: 309–337. <https://doi.org/10.1037/0033-2909.126.2.309>.
- Leventhal, T., V. Dupéré, and J. Brooks-Gunn. 2009. "Neighborhood Influences on Adolescent Development." In *Handbook of Adolescent Psychology: Contextual Influences on Adolescent Development* (Vol. 2, 3rd ed.), 411–443. John Wiley & Sons Inc. <https://doi.org/10.1002/9780470479193.adlpsy002013>.
- Maroko, A. R., T. M. Doan, P. S. Arno, M. Hubel, S. Yi, and D. Viola. 2016. "Integrating Social Determinants of Health With Treatment and Prevention: A New Tool to Assess Local Area Deprivation." *Preventing Chronic Disease* 13: 160221. <https://doi.org/10.5888/pcd13.160221>.
- Mayne, S. L., K. H. Morales, A. A. Williamson, et al. 2021. "Associations of the Residential Built Environment With Adolescent Sleep Outcomes." *Sleep* 44, no. 6: zsa276. <https://doi.org/10.1093/sleep/zsa276>.
- Munn, Z., M. D. J. Peters, C. Stern, C. Tufanaru, A. McArthur, and E. Aromataris. 2018. "Systematic Review or Scoping Review? Guidance for Authors When Choosing Between a Systematic or Scoping Review Approach." *BMC Medical Research Methodology* 18, no. 1: 143. <https://doi.org/10.1186/s12874-018-0611-x>.
- Oakes, J. M., K. E. Andrade, I. M. Biyoow, and L. T. Cowan. 2015. "Twenty Years of Neighborhood Effect Research: An Assessment." *Current Epidemiology Reports* 2, no. 1: 80–87. <https://doi.org/10.1007/s40471-015-0035-7>.
- Openshaw, S. 1984. "The Modifiable Areal Unit Problem." *Concepts and Techniques in Modern Geography* 38. <https://www.uio.no/studier/emner/sv/iss/SGO9010/openshaw1983.pdf>.
- Ouzzani, M., H. Hammady, Z. Fedorowicz, and A. Elmagarmid. 2016. "Rayyan—A Web and Mobile App for Systematic Reviews." *Systematic Reviews* 5, no. 1: 210. <https://doi.org/10.1186/s13643-016-0384-4>.
- Oyama, S. 1979. "The Concept of the Sensitive Period in Developmental Studies." *Merrill-Palmer Quarterly of Behavior and Development* 25, no. 2: 83–103. <http://www.jstor.org/stable/23083996>.
- Pasco, M. C., and R. White. 2024. "A Mixed Methods Comparison of Adolescents' and Researchers' Observations of Neighborhood Characteristics in Latinx Neighborhoods." *American Journal of Community Psychology* 73: 526–540. <https://doi.org/10.1002/ajcp.12742>.
- Pei, F., X. Wang, S. Yoon, and E. Tebben. 2019. "The Influences of Neighborhood Disorder on Early Childhood Externalizing Problems: The Roles of Parental Stress and Child Physical Maltreatment." *Journal of Community Psychology* 47, no. 5: 1105–1117. <https://doi.org/10.1002/jcop.22174>.
- Plunkett, S. W., S. Abarca-Mortensen, A. O. Behnke, and T. Sands. 2007. "Neighborhood Structural Qualities, Adolescents' Perceptions of Neighborhoods, and Latino Youth Development." *Hispanic Journal of Behavioral Sciences* 29, no. 1: 19–34. <https://doi.org/10.1177/0739986306295038>.
- Ramey, D. M., and N. Harrington. 2019. "Early Exposure to Neighborhood Crime and Child Internalizing and Externalizing Behaviors." *Health & Place* 57: 228–237. <https://doi.org/10.1016/j.healthplace.2019.04.010>.
- R Core Team. 2023. *R: A Language and Environment for Statistical Computing* [Computer software]. <https://www.r-project.org>.
- Richardson, R., T. Westley, G. Gariépy, N. Austin, and A. Nandi. 2015. "Neighborhood Socioeconomic Conditions and Depression: A Systematic Review and Meta-Analysis." *Social Psychiatry and Psychiatric Epidemiology* 50, no. 11: 1641–1656. <https://doi.org/10.1007/s00127-015-1092-4>.
- Schmidt, N. M., M. M. Glymour, and T. Osypuk. 2021. "Does the Temporal Pattern of Moving to a Higher-Quality Neighborhood Across a 5-Year Period Predict Psychological Distress Among Adolescents? Results From a Federal Housing Experiment." *American Journal of Epidemiology* 190, no. 6: 998–1008. <https://doi.org/10.1093/aje/kwaa256>.
- Sampson, R. J., and W. B. Groves. 1989. "Community Structure and Crime: Testing Social-Disorganization Theory." *American Journal of Sociology* 94, no. 4: 774–802. <https://doi.org/10.1086/229068>.
- Shareck, M., E. Aubé, and S. Sersli. 2023. "Neighborhood Physical and Social Environments and Social Inequalities in Health in Older Adolescents and Young Adults: A Scoping Review." *International Journal of Environmental Research and Public Health* 20, no. 8: 5474. <https://doi.org/10.3390/ijerph20085474>.
- Snow, J. 1856. "On the Mode of Communication of Cholera." *Edinburgh Medical Journal* 1, no. 7: 668–670.
- Thyden, N. H., N. M. Schmidt, S. Joshi, H. Kim, T. F. Nelson, and T. L. Osypuk. 2022. "Housing Mobility Protects Against Alcohol Use for Children With Socioemotional Health Vulnerabilities: An Experimental Design." *Alcoholism: Clinical and Experimental Research* 46, no. 9: 1695–1709. <https://doi.org/10.1111/acer.14911>.
- Tricco, A. C., E. Lillie, W. Zarin, et al. 2018. "PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation." *Annals of Internal Medicine* 169, no. 7: 467–473. <https://doi.org/10.7326/M18-0850>.
- VanderWeele, T. J. 2021. "Can Sophisticated Study Designs With Regression Analyses of Observational Data Provide Causal Inferences?" *JAMA Psychiatry* 78, no. 3: 244–246. <https://doi.org/10.1001/jamapsychiatry.2020.2588>.
- van Vuuren, C. L., S. A. Reijneveld, M. F. van der Wal, and A. P. Verhoeff. 2014. "Neighborhood Socioeconomic Deprivation Characteristics in Child (0–18 Years) Health Studies: A Review." *Health & Place* 29: 34–42. <https://doi.org/10.1016/j.healthplace.2014.05.010>.
- Wiafe, S., A. Mihan, and C. M. Davison. 2021. "Neighborhood-Level Influences and Adolescent Health Risk Behaviors in Rural and Urban Sub-Saharan Africa: A Systematic Review." *International Journal of Environmental Research and Public Health* 18, no. 14: 7637. <https://doi.org/10.3390/ijerph18147637>.
- Wodtke, G. T. 2013. "Duration and Timing of Exposure to Neighborhood Poverty and the Risk of Adolescent Parenthood." *Demography* 50: 1765–1788. <https://doi.org/10.1007/s13524-013-0219-z>.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.